STA

0034407

ENGINEERING CHANGE NOTICE

Page 1 of 4

1. ECN 198884

Proj. ECN

2. ECN Category (mark one)	3. Originator's Name, Organization, MSIN, and Telephone No.		4. Date
Supplemental [X] ENF Direct Revision [ ] Change ECN [ ] Temporary [ ] Standby [ ] Supersedure [ ] Cancel/Void [ ]	C. M. Loll, 7C420, R1-51, 3-5039		June 28, 1993
	5. Project Title/No./Work Order No. 241-A Tank Farm Cooling Water Sampling and Analysis Plan	6. Bldg./Sys./Fac. No. N/A	7. Impact Level 3Q
	8. Document Numbers Changed by this ECN (includes sheet no. and rev.) WHC-SD-WM-EV-077, Rev. 2	9. Related ECN No(s). 169264	10. Related PO No. N/A

11a. Modification Work	11b. Work Package No.	11c. Modification Work Complete	11d. Restored to Original Condition (Temp. or Standby ECN only)
[ ] Yes (fill out Blk. 11b) [X] No (NA Blks. 11b, 11c, 11d)	N/A	N/A Cog. Engineer Signature & Date	N/A Cog. Engineer Signature & Date

12. Description of Change

Section G.1, The following analytical method changes were made:

EPA Method 6010 was added for the analysis of tin and lead.
EPA Method 365.4 was added for the analysis of phosphorus.
EPA Method 335.2 was added for the analysis of total cyanide.
EPA Method 350.3 was added for the analysis of ammonia.
The analytical methods for bromide, chloride, and fluoride were changed to EPA Method 300.0
Analysis for Tin (Sn113) was added to the list of required analyses.

13a. Justification (mark one)							
Criteria Change	[X]	Design Improvement	[ ]	Environmental	[ ]		
As-Found	[ ]	Facilitate Const.	[ ]	Const. Error/Omission	[ ]	Design Error/Omission	[ ]

13b. Justification Details

The addition of analytical methods were made in order to allow more flexibility in chosing laboratories to perform the analyses. COMM 8/30/93

The change from previously specified methods to method 300.0 for chloride, bromide, and fluoride was made because the original methods which were called out were not available on contract. COMM 8/30/93

Sn-113 was added because it was supposed to be run in order to check routine sampling on the 241-A Tank Farm cooling water stream.

14. Distribution (include name, MSIN, and no. of copies)

See Attached Distribution

RELEASE STAMP

OFFICIAL RELEASE
BY WHC
DATE AUG 31 1993
55 Sta. 4

A-7900-013-2 (06/92) GEF095

9413149.0610

ENGINEERING CHANGE NOTICE

1. ECN (use no. from pg. 1)
198884

15. Design Verification Required	16. Cost Impact — ENGINEERING	16. Cost Impact — CONSTRUCTION	17. Schedule Impact (days)
[] Yes	Additional N/A	Additional N/A	Improvement N/A
[X] No	Savings [] $	Savings [] $	Delay []

18. Change Impact Review: Indicate the related documents (other than the engineering documents identified on Side 1) that will be affected by the change described in Block 12. Enter the affected document number in Block 19.

SDD/DD	[]	Seismic/Stress Analysis	[]	Tank Calibration Manual	[]
Functional Design Criteria	[]	Stress/Design Report	[]	Health Physics Procedure	[]
Operating Specification	[]	Interface Control Drawing	[]	Spares Multiple Unit Listing	[]
Criticality Specification	[]	Calibration Procedure	[]	Test Procedures/Specification	[]
Conceptual Design Report	[]	Installation Procedure	[]	Component Index	[]
Equipment Spec.	[]	Maintenance Procedure	[]	ASME Coded Item	[]
Const. Spec.	[]	Engineering Procedure	[]	Human Factor Consideration	[]
Procurement Spec.	[]	Operating Instruction	[]	Computer Software	[]
Vendor Information	[]	Operating Procedure	[]	Electric Circuit Schedule	[]
OM Manual	[]	Operational Safety Requirement	[]	ICRS Procedure	[]
FSAR/SAR	[]	IEFD Drawing	[]	Process Control Manual/Plan	[]
Safety Equipment List	[]	Cell Arrangement Drawing	[]	Process Flow Chart	[]
Radiation Work Permit	[]	Essential Material Specification	[]	Purchase Requisition	[]
Environmental Impact Statement	[]	Fac. Proc. Samp. Schedule	[]		[]
Environmental Report	[]	Inspection Plan	[]		[]
Environmental Permit	[]	Inventory Adjustment Request	[]		[]

19. Other Affected Documents: (NOTE: Documents listed below will not be revised by this ECN.) Signatures below indicate that the signing organization has been notified of other affected documents listed below.

Document Number/Revision	Document Number/Revision	Document Number Revision

20. Approvals

Signature	Date	Signature	Date
OPERATIONS AND ENGINEERING		ARCHITECT-ENGINEER	
Cog Engineer * [signature]	6/30/93	PE	
Cog. Mgr. * R.D. [signature]	6/30/93	QA	
QA * [signature]	7/9/93	Safety	
Safety		Design	
Security		Environ.	
Environ.		Other	
Projects/Programs * [signature]	7-20-93		
Tank Waste Remediation System			
Facilities Operations		DEPARTMENT OF ENERGY	
Restoration & Remediation		Signature or Letter No.	
Operations & Support Services			
IRM		ADDITIONAL	
Other			

9413149.0616

G. SAMPLE HANDLING AND ANALYSIS

G.1 Liquid Effluent Characterization Samples

Liquid effluent characterization samples will be analyzed for the following:

Analyte List	Method of Analysis
Sulfides	EPA method 9030
Semi-volatile organics (semi-VOA)	EPA method 8270
Volatile organics (VOA)	EPA method 8240
Total organic halides (TOX)	EPA method 9020
Herbicides	EPA method 8150
Organophosphorus Pesticides	EPA method 8140
Polychlorinated biphenyls (PCB) /organochlorine pesticides	EPA method 8080
Inductive coupled plasma metals (ICP)	EPA method 6010
Graphite furnace atomic absorption (AA) metals	
Arsenic	EPA method 7060
Lead	EPA method 7421/6010
Mercury	EPA method 7470 (cold vapor)
Selenium	EPA method 7740
Tin	EPA method 7870/6010
Total cyanide	EPA method 9010/9012/335.2
Hexavalent Chromium	EPA method 7196
Bromide	EPA method 300.0
Chloride	EPA method 300.0
Fluoride	EPA method 300.0
Total oil and grease	EPA method 9070
Total phenols	EPA method 9065/9066/9067
Biological oxygen demand (BOD)	EPA method 405.1
Chemical oxygen demand (COD)	EPA method 410.1, .2, .3, .4
Total organic carbon (TOC)	EPA method 9060
Phosphorus	EPA method 365.2, .3, .4
Nitrogen, nitrate, nitrite	EPA method 353.1, .2, .3
Ammonia	EPA method 350.1, .2, .3
Total dissolved solids (TDS)	EPA method 160.1
Total suspended solids (TSS)	EPA method 160.2
Alkalinity	EPA method 310.1/310.2
pH	EPA method 9040
Conductivity	EPA method 9050
Total alpha/beta	WHC approved laboratory method

Analyte List	Method of Analysis
Radionuclides	WHC approved laboratory method
Plutonium-238, 239, 241	
Americium-241	
Strontium-89, 90	
Cesium-137	
Ruthenium-103	
Ruthenium-Rhodium-106	
Tin-113	

The handling and preparation of samples will comply with the procedures found in the, Environmental Investigations and Site Characterization Manual, WHC-CM-7-7. When an analysis requires that a preservative be added to the sample bottle, the presevative is added in a clean laboratory environment prior to traveling to the sampling site. At the time of sample bottle preparation a chain of custody (COC) form will be initiated and will accompany the sample bottle into the field. A COC form will accompany each liquid effluent characterization sample, which may consist of several containers. The COC will account for each container. The sample bottles are stored in a cooler sealed with tamper evident tape and all custody transfers are noted on the bottle COC form.

Once a liquid effluent characterization sample has been drawn it must be in the physical control or view of the custodian, locked in an area where it can not be tampered with, or prepared for shipping with tamper-proof tape applied. Physical control includes being in the sight of the custodian, being in a room which will signal an alarm when entered, or locked in a cabinet. When more than one person is involved in sampling, one person shall be designated and only that person signs as sampler. This person is the custodian until the samples are transferred to another location or group and shall sign when releasing the samples to the designated receiver.

The preparation of either a single or a group of samples for shipment to a laboratory shall comply with the procedure EII 5.11 "Sample Packaging and Shipping." Samples going off-site for analysis will conform to all federal regulations governing shipment.

The approved laboratory shall designate a sample custodian and a designated alternate responsible for receiving all samples. The sample custodian or his alternate shall sign and date all appropriate receiving documents at the time of receipt and at the same time initiate an internal Chain of Custody form using documented procedures. A continuous chain of custody will be maintained from the time of sampling until final disposition of all samples.

Liquid effluent characterization samples will be collected in commercially available, individually certified, precleaned containers. The certification of the precleaned condition shall accompany the bottle. The necessary containers, sample volumes, and preservatives for the analyses are identified per the QAPP (WHC, 1992).

AUG 3 1 1993

Date Received: 6/29/93 | 7/26/93 KMB

INFORMATION RELEASE REQUEST

Reference: WHC-CM-3-4

Complete for all Types of Release

Purpose

- [ ] Speech or Presentation
  - [ ] Full Paper
  - [ ] Summary
  - [ ] Abstract
  - [ ] Visual Aid
- [ ] Speakers Bureau
- [ ] Poster Session
- [ ] Videotape

(Check only one suffix)

- [ ] Reference
- [X] Technical Report
- [ ] Thesis or Dissertation
- [ ] Manual
- [ ] Brochure/Flier
- [ ] Software/Database
- [ ] Controlled Document
- [ ] Other

ID Number (include revision, volume, etc.)
WHC-SD-WM-ECN-198884

List attachments.
SD-WM-EV-077 Rev

Date Release Required

Title: 241-A Tank Farm Cooling Water Sampling and Analysis Plan

Unclassified Category: UC-

Impact Level: 3Q

New or novel (patentable) subject matter? [X] No [ ] Yes
If "Yes", has disclosure been submitted by WHC or other company?
[ ] No [ ] Yes Disclosure No(s).

Information received from others in confidence, such as proprietary data, trade secrets, and/or inventions?
[X] No [ ] Yes (Identify)

Copyrights? [X] No [ ] Yes
If "Yes", has written permission been granted?
[ ] No [ ] Yes (Attach Permission)

Trademarks?
[X] No [ ] Yes (Identify)

Complete for Speech or Presentation

Title of Conference or Meeting

Group or Society Sponsoring

Date(s) of Conference or Meeting

City/State

Will proceedings be published? [ ] Yes [ ] No
Will material be handed out? [ ] Yes [ ] No

Title of Journal

CHECKLIST FOR SIGNATORIES

Review Required per WHC-CM-3-4	Yes	No	Reviewer - Signature Indicates Approval: Name (printed)	Signature	Date
Classification/Unclassified Controlled Nuclear Information	[ ]	[X]			
Patent - General Counsel	[X]	[ ]	OGC Memo 2/4/93		
Legal - General Counsel	[X]	[ ]	OGC Memo 2/4/93		
Applied Technology/Export Controlled Information or International Program	[ ]	[X]			
WHC Program/Project	[X]	[ ]	D. R. Speer		7-20-93
Communications	[ ]	[X]			
RL Program/Project	[X]	[ ]	R L HIGGINS		7/27/93
Publication Services	[X]	[ ]	M.K. Oldfield		7-22-93
Other Program/Project	[ ]	[X]			

Information conforms to all applicable requirements. The above information is certified to be correct.

	Yes	No
References Available to Intended Audience	[X]	[ ]
Transmit to DOE-HQ/Office of Scientific and Technical Information	[ ]	[X]

Author/Requestor (Printed/Signature): C. M. Loll / C M Loll — Date: 6/30/93

Intended Audience: [ ] Internal [ ] Sponsor [X] External

Responsible Manager (Printed/Signature): R. D. Gustavson R.D. Gustavson — Date: 6/30/93

INFORMATION RELEASE ADMINISTRATION APPROVAL STAMP

Stamp is required before release. Release is contingent upon resolution of mandatory comments.

APPROVED FOR RELEASE OFFICIAL DOCUMENT KMB 7/27/93

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Date Cancelled | Date Disapproved

BD-7600-062 (08/91) WEF074